

C 901

Control valves

Flow rate control / Flow limiter

Technical Data Sheet



Description

The control valves C 901 controls and maintains a maximum preset flow out of the valve regardless of variations in upstream and downstream pressure. Equipped with non return valves, it closes automatically in case of backflow (C901C - consult us).



C 901

Flow rate control / Flow limiter

DN mm	PN	PFA in bar	PS				Cat	Ref.	Weight* Kg
			L1	L2	G1	G2			
40	10/16/25	25	25	25	x	x	4.3	149B011432	15
50	10/16/25	25	25	25	x	x	4.3	149B011441	16
65	10/16/25	25	25	25	x	x	4.3	149B90106N	24
80	10/16/25	25	25	25	x	x	4.3	149B90108N	29
100	10/16	16	16	16	x	x	4.3	149B90110N	42
125	10/16	16	16	16	x	x	4.3	149B90111N	63
150	10/16	16	16	16	x	x	4.3	149B90112N	77
200	10	10	10	10	x	x	4.3	149B90114N	127
250	10	10	10	10	x	x	I	149B90115N	218
300	10	10	10	10	x	x	I	149B90116N	348

* Weight of valve alone

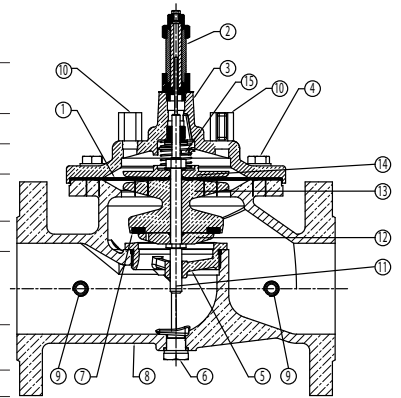
Important notice :

The indicated pressure for the different categories of fluids (L1/L2/G1/G2) is under no condition a guarantee of use. Therefore, it is essential to validate the use of products under given operating conditions.

Technical features	
Operating temperature	-10 °C to 90 °C
Upstream pressure	Mini. : 1,5 bar / Maxi. : 25 bar (see table above)
Connection	With flange PN (see table above)
Mediums	Clear water 2 mm
Viscosity	< to 40 cst
Vertical mounting	See option n°7

Nomenclature and materials

N°	Description	Materials	EURO	ANSI
1	Membrane	EPDM / Polyamide		
2	Position indicator with drain	Brass and stainless steel EPDM Cu	EN 12164-CuZn39Pb3-R360min EN 10088-3-X5CrNi18-10	ASTM B36 / ASTM B121 AISI 304 / ASTM A240 UNS C10200
3	Valve head high pressure	Cast iron / Epoxy Int/Ext	EN 1563 EN-GJS-400-15 except DN 125 : EN 1561-EN-GJL-300	ASTM A536 60-40-18 ASTM A48 class 45B
4	Nuts and bolts	Stainless steel	EN 10088-3-X5CrNi18-10	AISI 304 / ASTM A240
5	Removable seat	Stainless steel	EN 10213-GX5CrNi19-10+AT	AISI 304 / ASTM A240
6	Body drain plug and valve	Brass	EN 12164-CuZn39Pb3-R360min	ASTM B36 / ASTM B121
7	Reversible seat seal	EPDM		
8	Body high pressure	Cast iron / Epoxy Int/Ext 200µ ± 40µ	EN 1563 EN-GJS-400-15 except DN 125 : EN 1561-EN-GJL-300	ASTM A536 60-40-18 ASTM A48 class 45B
9-10	Pressure connection drilling	Chromed brass		
11	Stem	Stainless steel	EN10213-GX5CrNi19-10-AT	AISI 304 / ASTM A240
12	Flange	Stainless steel	EN10088-3X5CrNi18-10	AISI 304 / ASTM A240
13	Seal carrier	Bronze (DN40-50) Ductile iron / Epoxy	EN1982 CuSn5Zn5Pb2-C GS EN1561-EN-GJL-250	ASTM A 48 35 B
14	Plate	Bronze (DN40-50) Ductile iron / Epoxy	EN1982 CuSn5Zn5Pb2-C GS EN1561-EN-GJL-250	ASTM A 48 35 B
15	Spring	Stainless steel	EN10270-3 X10CrNi18-8	AISI 302



standard flow valve C 900

Approvals

ACS CE PED 2014/68/UE WRAS

International construction Standards :

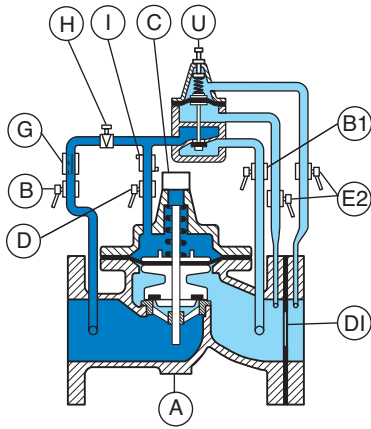
Directive 2014/68/UE

Connection with flange PN according to EN 1092-2

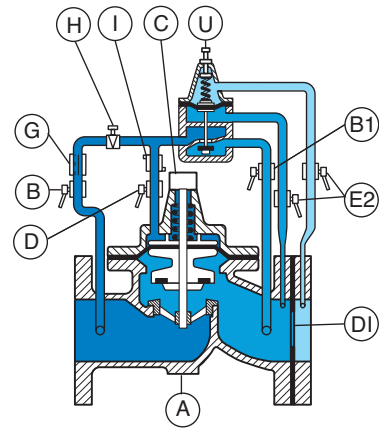
Application

The control valves C 901 can be used to control the flow from a pump into a network of water distribution or irrigation, or as flow limiter to feed a secondary system.

Operation



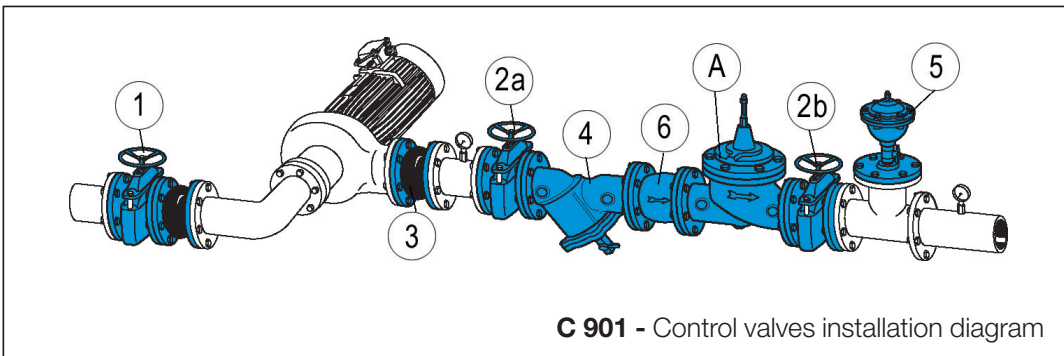
When the flow rate is increasing through the orifice plate (DI), the head loss also increases, the spring of pilot valve (U) is compressed, pilot valve (U) and main valve (A) will close. The flow rate decreases and the head loss will reach its setting level.



When the flow rate is decreasing through the orifice plate (DI), the head loss also decreases, pilot valve (U) and main valve (A) will open.

The flow rate increases and the head loss will reach its setting level.

Installation



N°	Description
A	Main valve
B	Upstream isolation valve
B1	Downstream isolation valve
C	Position indicator with drain
D	Chamber isolation valve
DI	Diaphragm
E2	Diaphragm isolation valve
G	Filter
H	Orifice-needle valve
I	Flow control
U	Pilot C901
1	Isolation valve
2a	Upstream isolation valve of the main water pipe
2b	Downstream isolation valve of the main water pipe
3	Rubber expansion joint
4	Filter
5	Single function air valve
6	Non return valve of the pump

Setting range :

- 0 to 0,689 bar
- 0,14 to 2,41 bar

Installation :

- install a strainer upstream
- install an air relief valve downstream or at the high point near the control valve.
- horizontal setting up : the cap of the valve should be oriented to the top and inclined at 45° maximum.
- vertical setting up : change the spring of the main valve (option 7)
- keep a downstream pressure

Other types :

- C901S, C901M
- FKM seals in the main valve and in the pilot.

Maintenance

We recommend a maintenance programme of between 6 to 12 months according to the quality of the water and to the pressure :

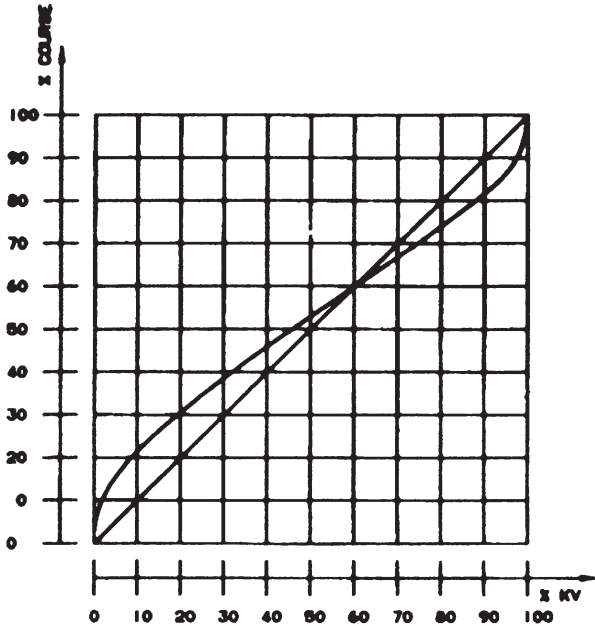
- Purging the upper chamber
- Flushing the valves not frequently used
- Checking and cleaning filters of the pilot circuit and main piping system.
- Checking the working (pressures)

Every 5 years, general maintenance is advisable :

- Dismantling
- Cleaning of main valve and pilot valve
- Preventive removing of the seals (set available - please consult us)
- Reassembling and tests.

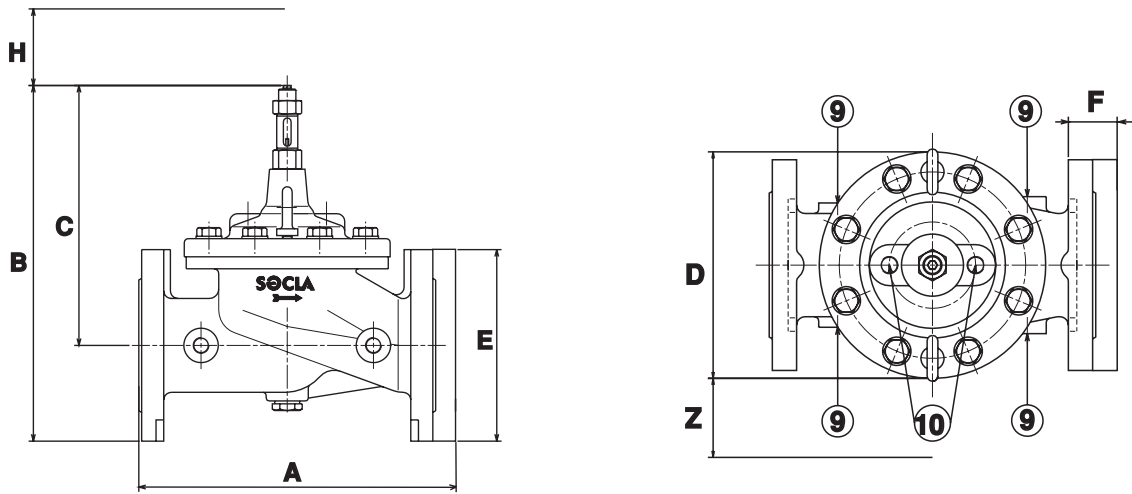
Operating characteristics

Choice of base valve



DN	Mini	Maxi	KV		ζ	PN	PFA	PN	PFA	PN	PFA
			m ³ /h	L/s		bar	bar	bar	bar	bar	bar
40	4,5	32,00	45,66	12,68	1,93	10/16	16	25	25	-	-
50	7	32,00	45,66	12,68	4,70	10/16	16	25	25	-	-
65	12	54,00	57,75	16,08	8,39	10/16	16	25	25	-	-
80	18	82,00	80,00	22,22	10,00	10/16	16	25	25	-	-
100	28	127,00	136,00	37,78	8,47	10/16	16	25	25	-	-
125	44	199,00	220,00	61,11	7,90	10/16	16	25	25	-	-
150	64	286,00	264,00	73,33	11,38	10/16	16	25	25	-	-
200	113	509,00	600,00	166,67	6,96	10	10	25	25	16	16
250	177	795,00	900,00	250,00	7,56	10	10	25	25	16	16
300	255	1145,00	1224,00	340,00	8,47	10	10	25	25	16	16

Sizing



standard flow valve C 900

DN	A	B	C	D	E	F	G	H	Z	9	10
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	"	"
40	274	285	210	170	152	23	57	55	254	1/4	1/4
50	274	285	210	170	161	23	57	55	254	1/4	1/4
60	314	352	257	200	185	24	48	76	254	3/8	1/4
65	334	372	272	217	200	26	50	90	254	3/8	3/8
100	374	423	302	241	235	28	52	90	254	3/8	3/8
125	430	506	371	296	270	30	60	100	254	3/8	3/8
150	512	551	401	363	300	20	52	100	254	3/8	3/8
200	626	709	529	467	360	22	48	114	254	3/8	3/8
250	760	844	631	587	425	24	54	127	254	1/2	1/2
300	880	975	730	680	486	27	57	140	254	1/2	1/2

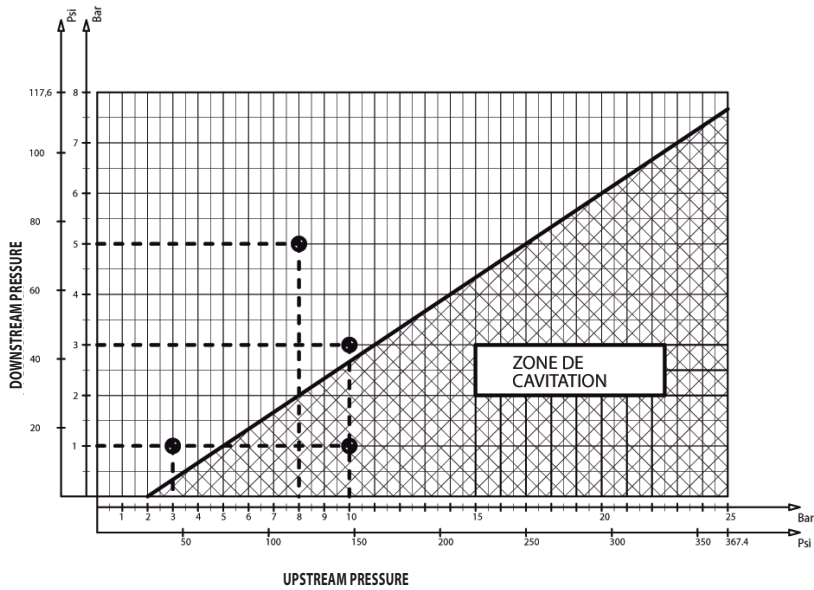
Other operating characteristics

Cavitation

A too large differential pressure and a low downstream pressure may result in damage to the valve by cavitation.

To avoid it, refer to the cavitation curve and if needed, reduce the differential pressure by installing and connecting two or more control valves in same line (consult us).

Stainless steel seat and counter seat are standard.



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